METROPOLITAN HEALTH DEPARTMENT
POLLUTION CONTROL DIVISION

Regulation No. 14

Regulation For Control of Nitrogen Oxides

As provided for in Chapter 10.56, Section 10.56.090,
of the Code of Laws of the Metropolitan Government
of Nashville and Davidson County, Tennessee

Adopted: August 10, 1993
By the Metropolitan Board of Health
Nashville and Davidson County

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REGULATION FOR CONTROL OF NITROGEN OXIDES

This Regulation establishes emission standards for stationary sources of nitrogen oxides located in Metropolitan Nashville and Davidson County, Tennessee. This Regulation is promulgated as provided for in Section 10.56.090, "Board - Powers and Duties" of Chapter 10.56 of the Metropolitan Code of Laws.

SECTION 14-1: Definitions.

As used in this Regulation, all terms not defined herein shall have the meaning given them in Chapter 10.56, "Air Pollution Control," Section 10.56.010, "Definitions," of the Metropolitan Code of Laws.

(a) **"Facility"** - means any building, structure, installation, activity, or combination thereof which contains one or more stationary sources of air contaminants.

(b) **"LOWEST ACHIEVABLE EMISSION RATE (LAER)"** - The rate of emission which reflects the most stringent emission limitation which is achieved in practice or achievable by such class or category of sources. In no event shall the application of this term permit a proposed, new or modified source to emit any pollutant in excess of the amount allowable under applicable New Source Performance Standards.

(c) **"Major Stationary Source"** - means any source which emits or has the potential to emit one hundred (100) tons of nitrogen oxides or more per year.

(d) **"Nitrogen Oxides (NO_X)"** - means all oxides of nitrogen except nitrous oxide.

(e) **"Potential to Emit"** - means the maximum capacity of a stationary source to emit any air pollutant under its physical and operational design. Any physical or operational limitation on the capacity of a source to emit an air pollutant, including air pollution control equipment and restrictions on hours of operation or on the type or amount of material combusted, stored, or processed, shall be treated as part of its design of the limitation is enforceable by the Administrator.

(f) **"Reasonable Available Control Technology (RACT)"** - means the lowest emission limit that a particular source is capable of meeting by the application of control technology that is reasonably available considering technological and economic feasibility.

SECTION 14-2: Emission Standards.

(a) Any owner or operator of a facility which emits or has the potential to emit one hundred (100) tons per year or more of nitrogen oxides (NO_X) shall apply reasonably available control technology (RACT) to control NO_X emissions from that source.

(b) The owner or operator of a tangentially-fired coal burning boiler having heat input capacity in excess of six hundred million (600,000,000) BTU per hour shall not allow emissions of

nitrogen oxides from said boiler in excess of 0.45 pounds per million BTU (30-day rolling average). The Director shall not grant a permit to construct for any new or modified nitrogen oxides stationary source if such construction will interfere with reasonable further progress. Before the Director can issue a construction permit to a major source, all other facilities operated by the applicant in the State of Tennessee must be in compliance or on a Federally approved compliance schedule. Before the Director can issue a permit to construct, any new or modified major nitrogen oxides stationary source must meet the following:

(1) Meet the lowest achievable emission rate (LAER) for that type of source as determined by the Director; and

(2) Demonstrate that by the time the proposed source or modification is to commence operation, sufficient emission offsets should be in effect such that the total actual emissions from existing sources in the area, from new or modified sources which are not major stationary sources, and from the proposed source or modification will be sufficiently less than total actual emissions from existing sources prior to the application for such permit to construct or modify so as to request reasonable further progress as defined in Section 3-1 of the Regulation.

The emission offset must be in effect and legally enforceable on or before the date that the source or modification is to commence operation and must be demonstrated by source testing or another method acceptable to the Director.

For the purpose of satisfying the emission offset requirement in regard to nitrogen oxides, the ratio of total emission reductions to total increased emissions shall be 1.15 to 1.00.

Emission offsets may be achieved by shutting down an existing source or by permanently curtailing production or hours of operation below baseline levels provided that the work force has been notified or by agreeing to control emissions of the non-attainment pollutant to a level lower than the statutory requirement. Source shutdowns and curtailments in production or operating hours occurring prior to the date that the new source application is filed generally may not be used for emission offset credit. However, where an applicant can establish that it shutdown or curtailed production less than one year prior to the filing date and the proposed new source is a replacement for the shutdown or curtailed source, credit for such shut down or curtailment may be applied to offset emissions from the new source.

Emission reductions pursuant to any statutory requirement are not creditable for emission offsets. However, a source may achieve offset credit by agreeing to control emissions of the non-attainment pollutant to a level lower than the statutory requirement. Furthermore, emission reductions achieved indirectly as a result of a statutory requirement may be creditable for emission offsets provided that the emission reductions meet the requirements of Paragraph (ii) of this Section.

A nitrogen oxides stationary source shall make an analysis of alternate sites, sizes, production processes, and environmental control technology for the proposed source. A permit shall only be issued if the benefits of the proposed source significantly outweigh the environmental and social cost imposed on the public as a result of the source's

location, construction or modification. The Director shall require the submittal of such information as he deems necessary for this analysis.

(c) To determine if the one hundred (100) tons per year specified in (a) is met, the nitrogen oxides contribution from all process emissions fuel burning equipment shall be totaled.

(d) The reasonable available control technology requirement shall not apply to:

(1) Any process emission source or fuel burning equipment installation which has the potential to emit less than one (1) ton per year of nitrogen oxides; or

(2) Any fuel burning equipment or component of a process emission source which does not operate between April 1, and October 31.

SECTION 14-3: Procedure for Determining RACT.

(a) The owner or operator of each source of nitrogen oxides subject to this Regulation, except large utility boilers, shall investigate all reasonably available emission reduction methods which have been demonstrated on identical or similar types of nitrogen oxides emitting equipment and propose what he considers to be RACT. This will require the owner or operator to:

(1) Fully describe the applicable emission points and basis for estimating current and potential emissions;

(2) List the emission points and possible source emission points available for emission reductions;

(3) List each alternative nitrogen oxides control technique for each emission point such as burner modifications, process modifications, add-on control devices, etc., along with the emission reduction achievable by use of each alternative;

(4) List the cost of each alternative control technique, including initial costs as well as cost effectiveness (cost of control per ton of emission reduction);

(5) Where applicable, list regulatory requirements in other states in which identical or similar sources are subject to nitrogen oxide RACT requirement; and

(6) Recommend the level of control considered to be RACT.

(b) Upon receipt of the above RACT proposal the Pollution Control Division of the Metropolitan Health Department will review the submittal and determine whether or not the RACT demonstration is adequate to justify the RACT recommendation and whether or not the recommended RACT level is proper. This will be accomplished by reviewing the list of alternative control techniques evaluated to ensure that all reasonable available and demonstrated control techniques were considered, by reviewing the cost analysis for reasonableness, by independently contacting other air pollution control agencies and the U.S. EPA to determine what level of control is required or suggested at identical or similar sources in other areas of jurisdiction. If an initial proposal is determined deficient, the Pollution Control Division will negotiate the matter with the source owner or operator. If necessary, Pollution Control Division's independent judgement will control.

SECTION 14-4: Recordkeeping and Reporting Requirements.

When an operating permit is issued for a nitrogen oxides emitting source in accordance with Section 10.56.040, "Operating Permits" of Chapter 1056, "Air Pollution Control" of the Metropolitan Code of Laws or Regulation No. 13, "Part 70 Operating Permit Program" the permit will include sufficient enforceable conditions to specify the required level or type of control, the appropriate averaging time, and recordkeeping, reporting and testing requirements. Where applicable, U.S. EPA recommended test methods will be required. The averaging times for each allowable emission rate will follow minimum EPA requirements for identifiable and enforceable emissions that relate to ozone formation (normally daily or no more than monthly, depending on source operation).

SECTION 14-5: Compliance Schedule.

The owner or operator of any process emission source or fuel burning equipment subject to this Regulation shall:

(a) Submit a demonstration of reasonable available control technology to this office within 90 days after adoption of this Regulation by the Metropolitan Board of Health; or

(b) Submit a final control plan and obtain construction permit(s) for the installation of the nitrogen oxides emission control system and/or modification of the source or equipment within 150 days of adoption; and

(c) Complete construction or installation of control system by May 31, 1995; and

(d) Demonstrate final compliance with the nitrogen oxides reasonable available control technology requirement of this Regulation by July 31, 1995, using approved test methods and procedures.